
Name of Organization: Ohio Environmental Protection Agency

Type of Organization: State

Contact Information: Mr. Thomas Balduf

Division of Surface Water/waterQuality

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Project Title: Ottawa River Water Column PCB Sampling

Project Category: Contaminated Sediments

Rank by Organization (if applicable): 1

Total Funding Requested (\$): 141,170 **Project Duration:** 2 Years

Abstract:

The Ottawa River is heavily contaminated with organic chemicals and metals that originated from industrial activity and uncontrolled landfills. Work conducted by the Ohio EPA, U.S.EPA and others has brought several point sources under control and landfills have been, or are in the process of being remediated. However, sediments in the river remain heavily contaminated presenting a risk to both human and fish and wildlife populations. The focus of this project will be to add to the existing data base by collecting water column concentrations for chemicals of concern, particularly PCBs. Presently, there are no data linking contamination in the river to Maumee Bay. It is suspected that PCBs are transported to the Bay through the water column, either attached to sediment particles or as body burden in phytoplankton, zooplankton and other organisms in the lower trophic levels of the ecosystem. This proposal seeks to identify trace level concentrations of congener-specific PCBs in the water column to determine if it is indeed a pathway for PCB movement from the Ottawa River to Maumee Bay and into the higher trophic level feeders associated with the Maumee Bay ecosystem.

Geographic Areas Affected by the Project

States:

<input type="checkbox"/> Illinois	<input type="checkbox"/> New York
<input type="checkbox"/> Indiana	<input type="checkbox"/> Pennsylvania
<input checked="" type="checkbox"/> Michigan	<input type="checkbox"/> Wisconsin
<input type="checkbox"/> Minnesota	<input checked="" type="checkbox"/> Ohio

Lakes:

<input type="checkbox"/> Superior	<input checked="" type="checkbox"/> Erie
<input type="checkbox"/> Huron	<input type="checkbox"/> Ontario
<input type="checkbox"/> Michigan	<input type="checkbox"/> All Lakes

Geographic Initiatives:

<input type="checkbox"/> Greater Chicago	<input type="checkbox"/> NE Ohio	<input type="checkbox"/> NW Indiana	<input type="checkbox"/> SE Michigan	<input type="checkbox"/> Lake St. Clair
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Primary Affected Area of Concern: Maumee River, OH

Other Affected Areas of Concern:

For Habitat Projects Only:

Primary Affected Biodiversity Investment Area:

Other Affected Biodiversity Investment Areas:

Problem Statement:

In 1991, Ohio EPA produced a report titled "Fish Tissue, Bottom Sediment, Surface Water, Organic and Metal Chemical Evaluation and Biological Community Evaluation" for the Ottawa River/Ten Mile Creek, a tributary in the Maumee AOC. The report documented various pollution problems, ecological impacts and areas needing further analysis including grossly contaminated surface sediments. Ultimately, the report resulted in the issuance of a fish consumption/contact advisory for the Ottawa River from RM 8.8 to Lake Erie in April 1991 by the Ohio Department of Health. The advisory was based on the detection of extremely elevated levels of PCBs in sediment and fish tissue. This report initiated Ohio EPA's efforts in 1994 and 1998 to characterize the contaminants and delineate the contaminant sources. These efforts were coordinated by the Divisions of Emergency and Remedial Response and Surface Water.

Proposed Work Outcome:

The Ohio EPA is working with its partners to thoroughly evaluate contaminated sediments in the Ottawa River and design a remedy that will reduce risk to human, fish and wildlife populations, and eliminate contaminant loads to Lake Erie. Ohio EPA conducted a sediment survey at over 90 stations in 1998 and will collect additional samples in 2000. In 2000, Ohio EPA will begin hotspot identification as well as ecological and human health risk assessments. Ohio EPA has collected fish tissue from the Ottawa River for several years. In 1999, the U.S. Fish and Wildlife Service collected fish from Maumee Bay and eagle blood from eagles nesting on the Woodtick Peninsula. While there are substantial data on sediments and fish tissue in the Ottawa River and Maumee Bay, wildlife data are limited and there are no recent data on water column concentrations of chemicals of concern. These data are needed to fully assess exposure via the water column to fish, wildlife and recreational users of the resource. Water column data would also allow a preliminary approximation of loading to Maumee Bay and Lake Erie, and possibly identify other sources. To fill this gap, water column samples will be collected at 12 sites in the Ottawa River and Maumee Bay and analyzed for PCBs and selected pesticides. Sites will be located as follows: One site will be upstream of landfills and other discharges, known or suspected of being sources of PCBs. Five sites will be located in the Ottawa River at approximately equal distances between the upstream site and the mouth. Six sites will be located in Maumee Bay between the Ottawa River mouth and the Woodtick Peninsula. Two surveys, representing high flow and low flow conditions will be conducted. During each survey high volume water samples (100 liters or greater) will be collected. These will be separated into a dissolved and particulate phase using GFF glass fiber filters following the methods employed by U.S.EPA/GLNPO. Both the dissolved and particulate phase samples will be analyzed for PCB congeners and selected pesticides by a certified contract laboratory with demonstrated expertise in the analysis of trace level organics in water. Separate samples will be collected and analyzed for suspended solids and particulate organic carbon.

Project Milestones:**Dates:**

Project Start	10/2000
Develop Work Plan	10/2000
Implement Field Activities First Run	11/2000
Laboratory Analysis of Water Column Data	12/2000
Implement Field Activities Second Run	05/2001
Laboratory Analysis of Water Column Data	06/2001
Review Data and Prepare Final Report	12/2001
Project End	06/2002

☐ Project Addresses Environmental Justice

If So, Description of How:

☒ Project Addresses Education/Outreach

If So, Description of How:

Ohio EPA will be able to assist the Maumee RAP in one of its primary objectives: community education. Ohio EPA has partnered with the Maumee RAP on numerous occasions to host public meetings, informational sessions, tours, etc. These events have always been well attended. They have demonstrated that the people in the Maumee AOC, particularly the Ottawa River watershed, are very interested in this area and are continually seeking additional information. This project will help provide new information on the status of the Ottawa River. The Maumee RAP and the Ottawa River Remediation Team will be able to use this information for outreach and to recruit new partners into these programs.

Project Budget:

	Federal Share Requested (\$)	Applicant's Share (\$)
Personnel:	41,325	2,175
Fringe:	9,975	525
Travel:	0	0
Equipment:	4,750	250
Supplies:	4,750	250
Contracts:	0	0
Construction:	0	0
Other:	61,750	3,250
Total Direct Costs:	122,550	6,450
Indirect Costs:	18,620	980
Total:	141,170	7,430
Projected Income:	0	0

Funding by Other Organizations (Names, Amounts, Description of Commitments):

Description of Collaboration/Community Based Support:

This project will further the goals of several organizations. Two of the primary collaborating organizations are the Maumee RAP and the Ottawa River Remediation Team. The Maumee RAP is a community based organization focusing on the restoration of the Maumee Area of Concern. The Maumee RAP along with its Ottawa River Action Group and Dumps and Landfills Action Group will provide input during the planning stages and also assist in dissemination of the results. The Ottawa River Remediation Team is composed of representatives from all levels of government including two U.S. Army Corps of Engineers Districts, U.S.EPA, U.S. Fish and Wildlife Service, GLNPO, a U.S. Representative, and the states of Michigan and Ohio. Also included in this partnership are local businesses, industry and organizations. The mission of this group is to expedite the remediation and restoration of the Ottawa River. The work outlined in this proposal directly addresses the goals of this team. Through funding this proposal, this partnership will be able to continue making progress on the jointly identified objectives. The Ohio EPA will work closely with the U.S. Fish and Wildlife Service in planning and conducting this study, and will incorporate the experience gained by the U.S.FWS from its work on the Fox River/Green Bay area.